FIG. 1

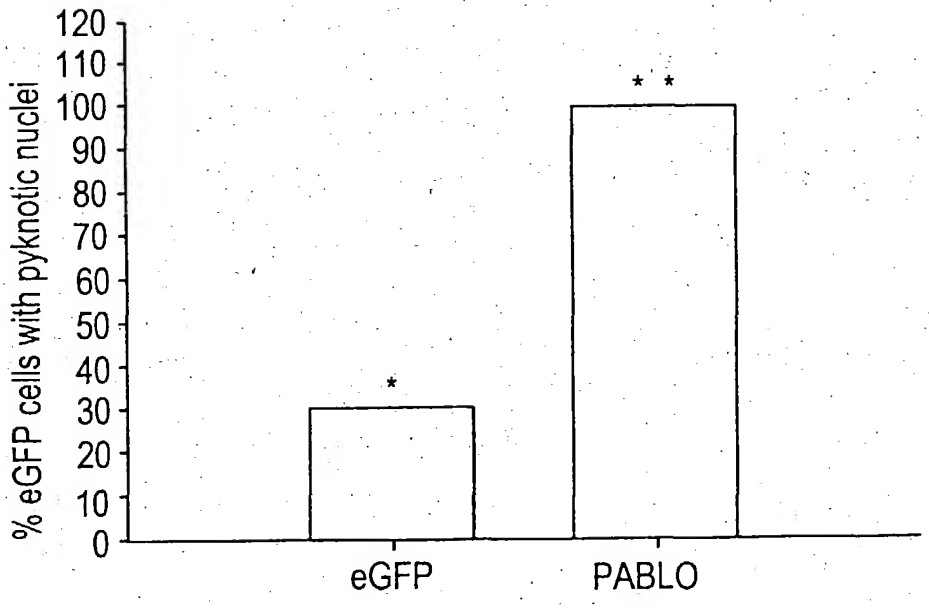
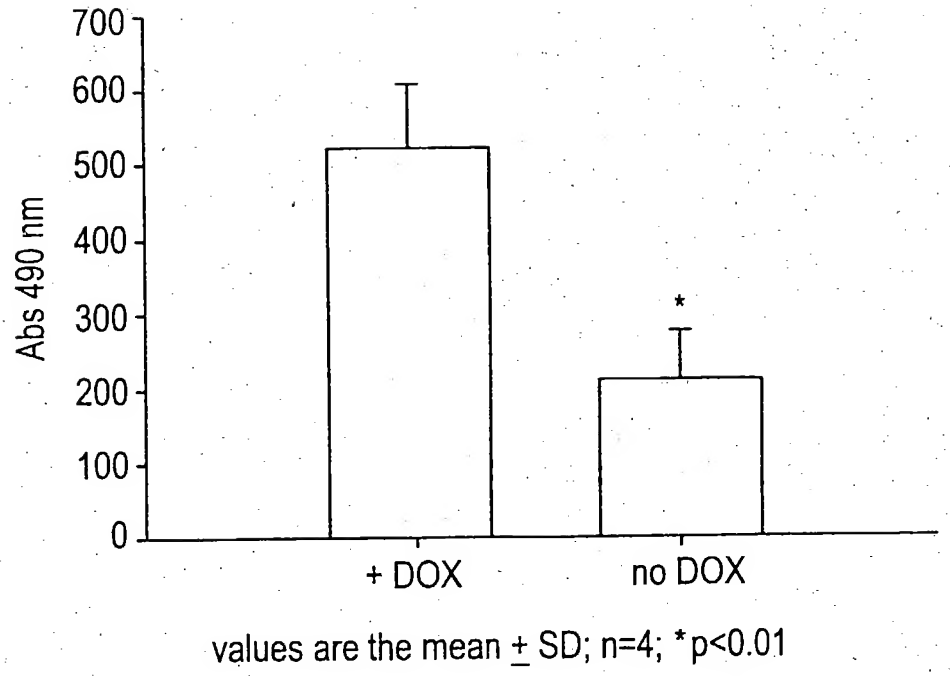

% eGFP cells with pyknotic nuclei
120
110
100
90
80
70
60
50
40
30
20
10
0
*
* *
eGFP
PABLO

FIG. 2



values are the mean ± SD; n=4; *p<0.01

FIG. 3

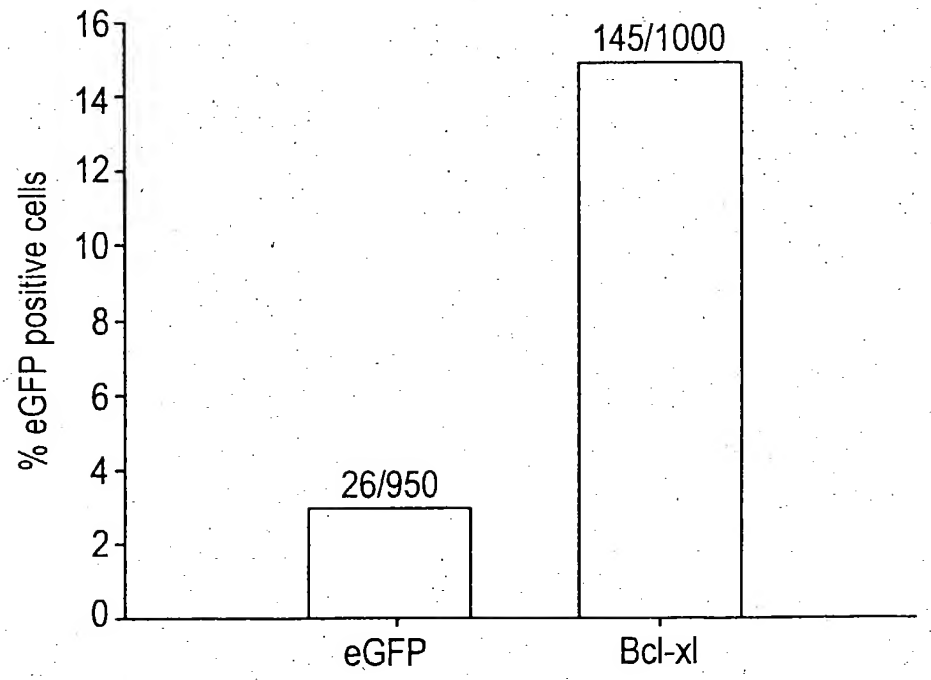

% eGFP positive cells
16
14
12
10
8
6
4
2
0
145/1000
26/950
eGFP
Bcl-xl

FIG. 4

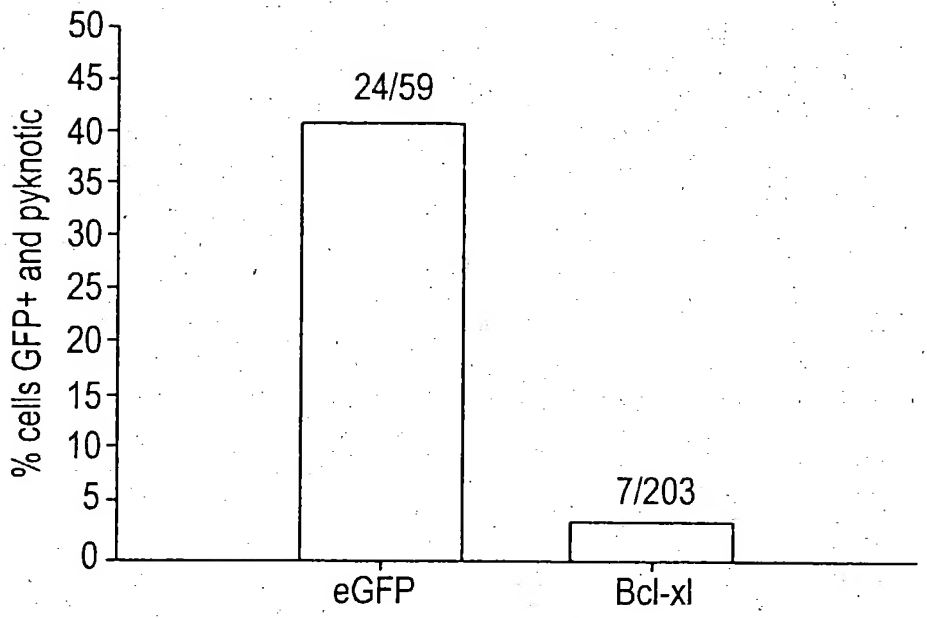

% cells GFP+ and pyknotic
50
45
40
35
30
25
20
15
10
5
0
24/59
7/203
eGFP
Bcl-xl

FIG. 5

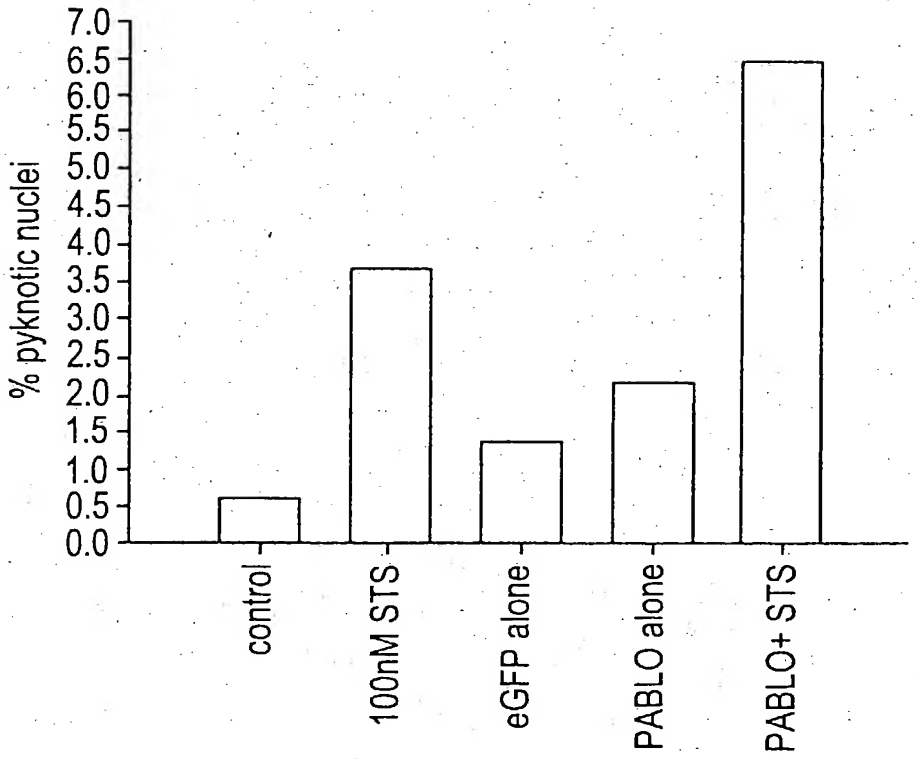

% pyknotic nuclei
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
control
100nM STS
eGFP alone
PABLO alone
PABLO+ STS

FIG. 6

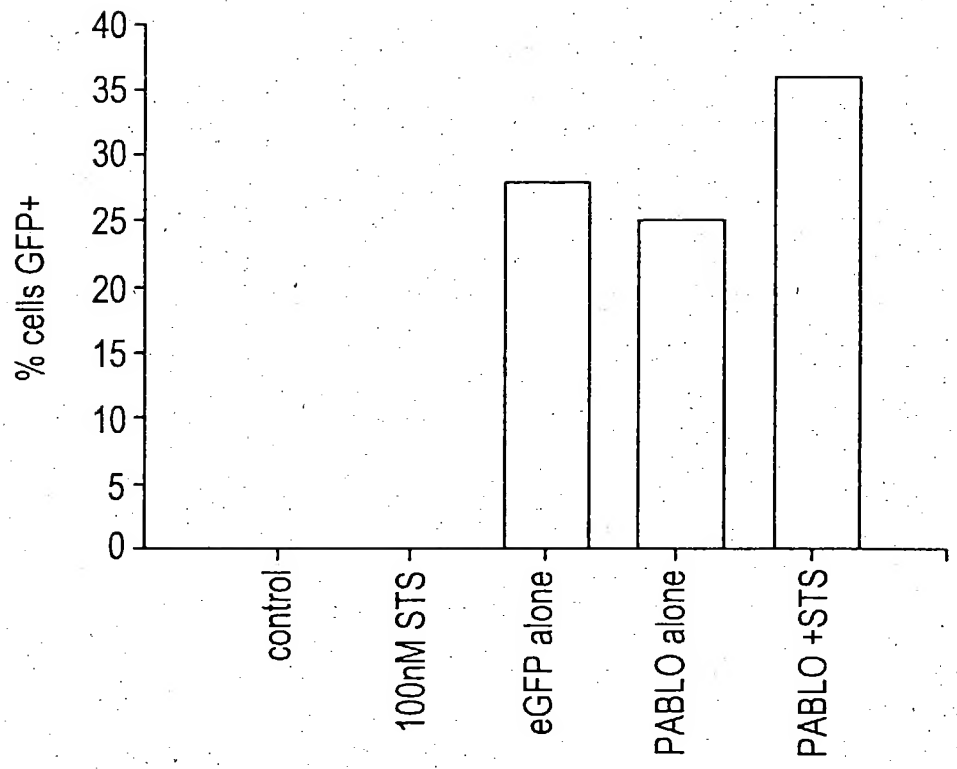

% cells GFP+
40
35
30
25
20
15
10
5
0
control
100nM STS
eGFP alone
PABLO alone
PABLO +STS

FIG. 7

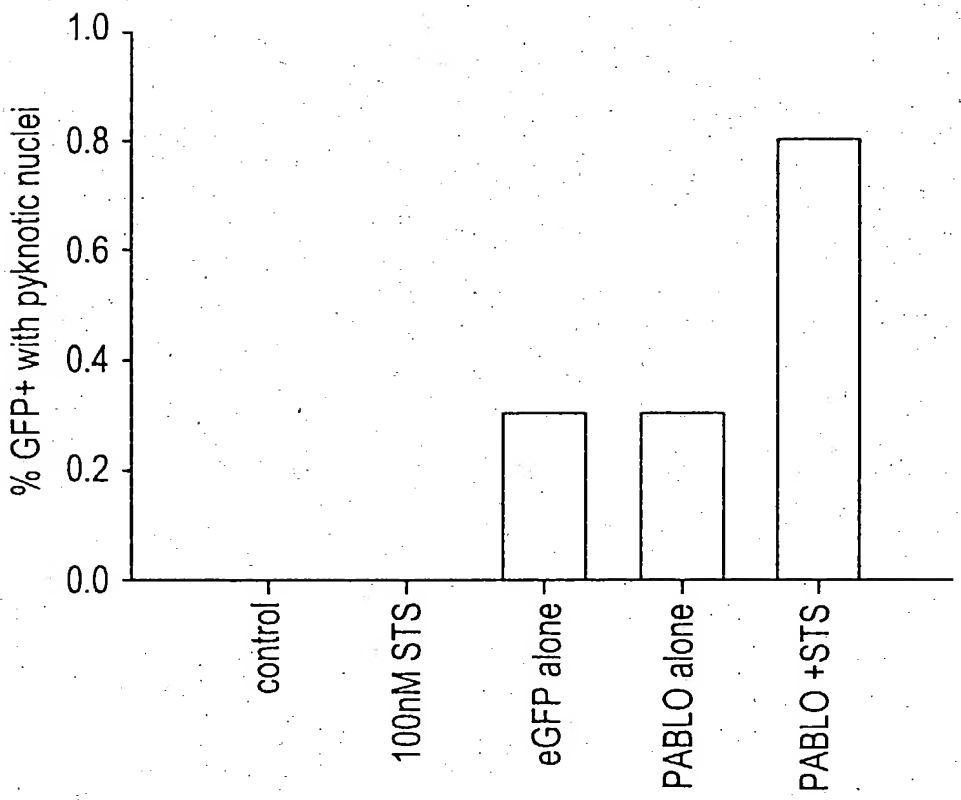

% GFP+ with pyknotic nuclei
1.0
0.8
0.6
0.4
0.2
0.0
control
100nM STS
eGFP alone
PABLO alone
PABLO +STS

FIG. 8A

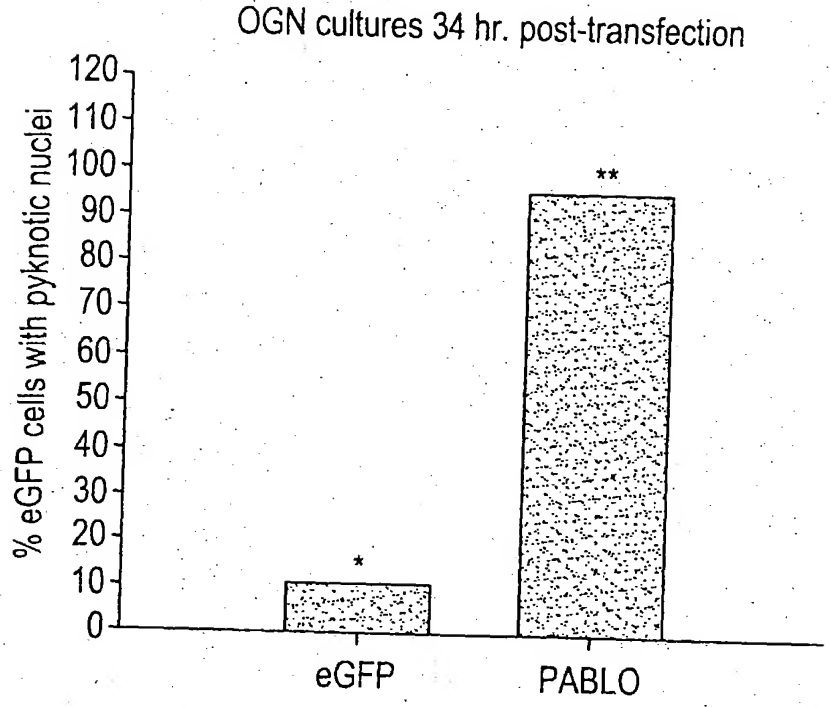

OGN cultures 34 hr. post-transfection
% eGFP cells with pyknotic nuclei
120
110
100
90
80
70
60
50
40
30
20
10
0
*
**
eGFP
PABLO

FIG. 8B

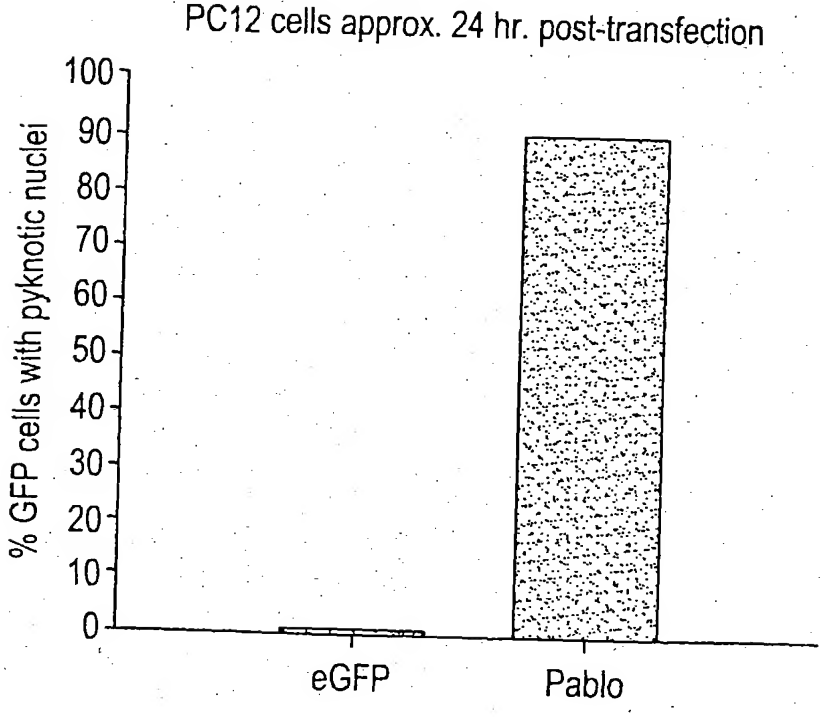

PC12 cells approx. 24 hr. post-transfection
% GFP cells with pyknotic nuclei
100
90
80
70
60
50
40
30
20
10
0
eGFP
Pablo

FIG. 8C

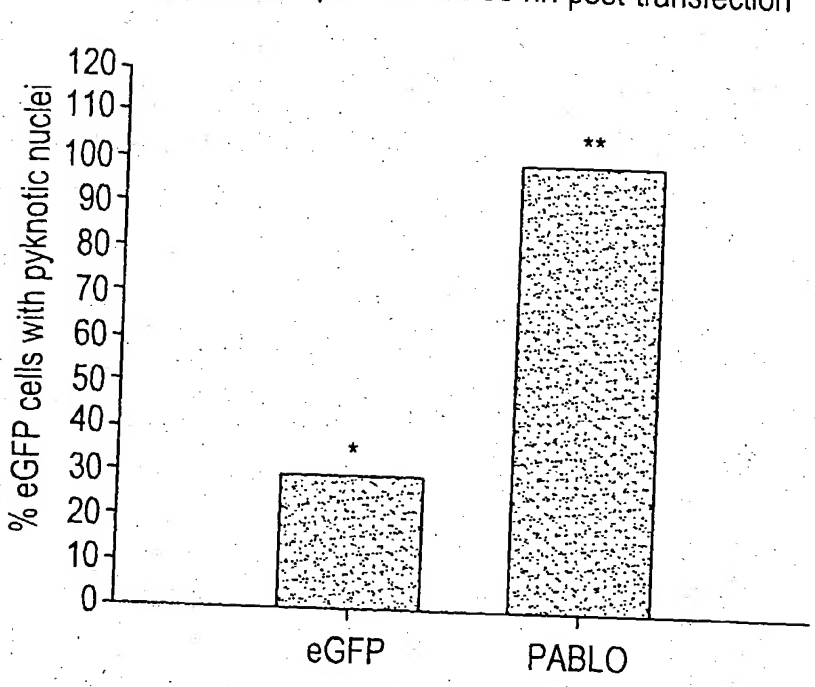

rat hippocampal cultures 30 hr. post-transfection
% eGFP cells with pyknotic nuclei
120
110
100
90
80
70
60
50
40
30
20
10
0
*
**
eGFP
PABLO

FIG. 8D

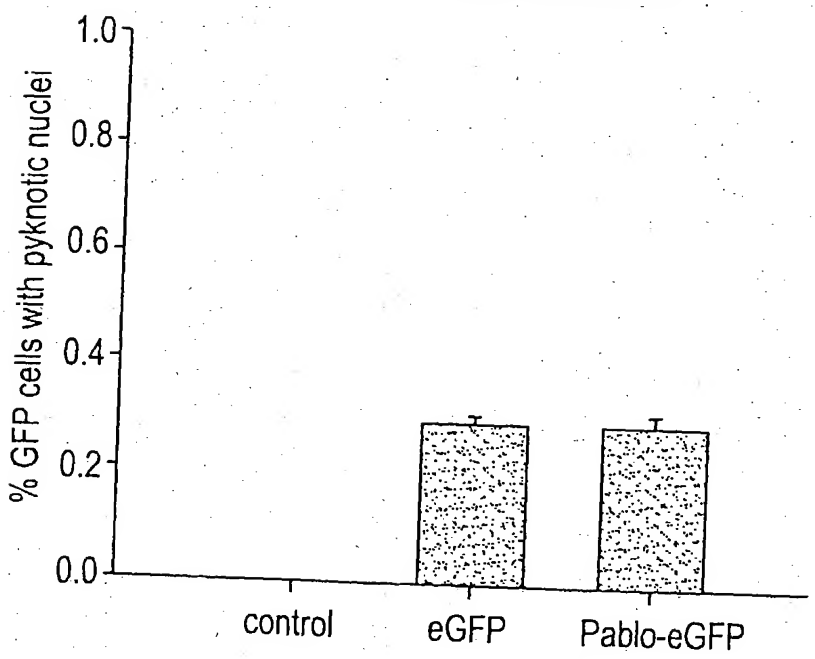

HEK 293: 48 hr. post-transfection
% GFP cells with pyknotic nuclei
1.0
0.8
0.6
0.4
0.2
0.0
control
eGFP
Pablo-eGFP

FIG. 9

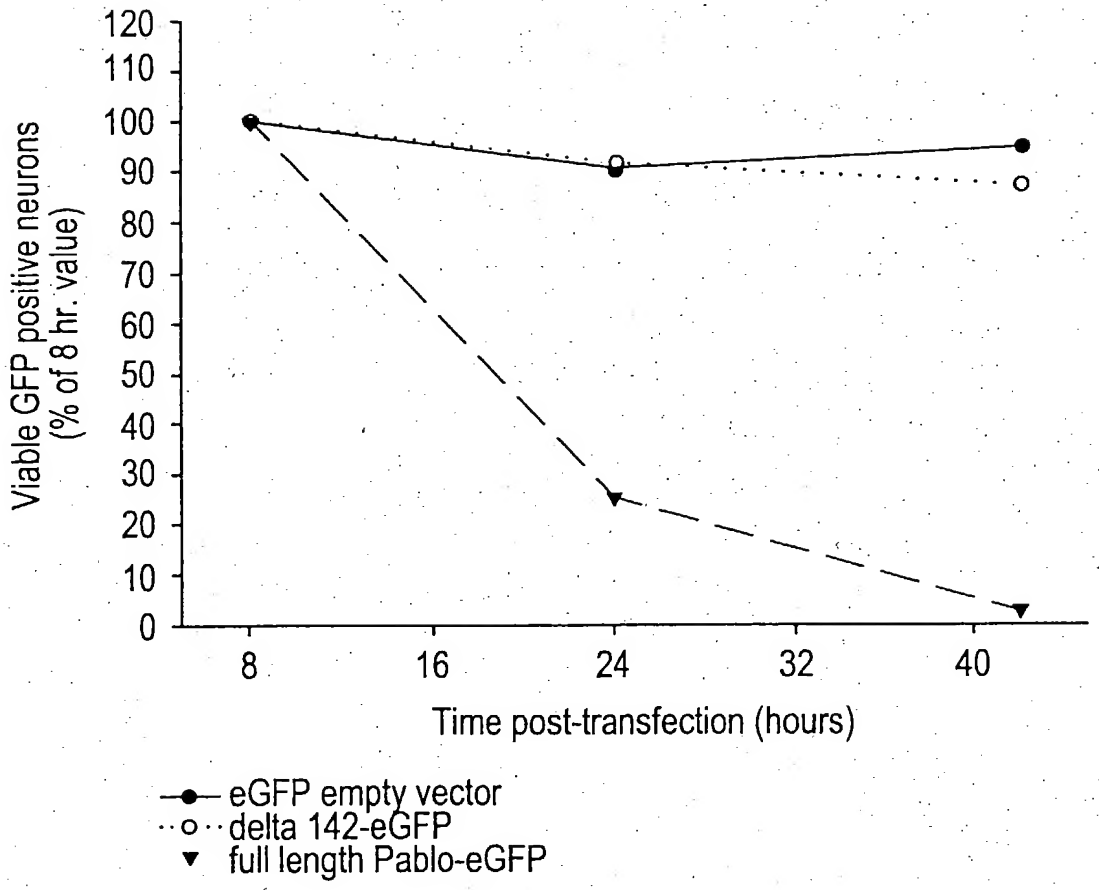

Viable GFP positive neurons
(% of 8 hr. value)
120
110
100
90
80
70
60
50
40
30
20
10
0
8
16
24
32
40
Time post-transfection (hours)
eGFP empty vector
delta 142-eGFP
full length Pablo-eGFP

FIG. 10A

Bclxl (ΔTM)/pAS-1

	10	20	30	40	50
19 Bclxl/pAS2-1	CAGCTTTGAC	TCATATGAAA	ATGTCTCAGA	GCAACCGGGA	GCTGGTGGTT
	60	70	80	90	100
19 Bclxl/pAS2-1	GACTTTCTCT	CCTACAAGCT	TTCCCAGAAA	GGATACAGCT	GGAGTCAGTT
	110	120	130	140	150
19 Bclxl/pAS2-1	TAGTGATGTG	GAAGAGAACA	GGACTGAGGC	CCCAGAAGGG	ACTGAATCGG
	160	170	180	190	200
19 Bclxl/pAS2-1	AGATGGAGAC	CCCCAGTGCC	ATCAATGGCA	ACCCATCCTG	GCACCTGGCA
	210	220	230	240	250
19 Bclxl/pAS2-1	GACAGCCCCG	CGGTGAATGG	AGCCACTGGC	CACAGCAGCA	GTTTGGATGC

FIG. 10B

	260 270 280 290 300
19 Bclxl/pAS2-1	CCGGGAGGTG ATCCCCATGG CAGCAGTAAA GCAAGCGCTG AGGGAGGCAG
	310 320 330 340 350
19 Bclxl/pAS2-1	GCGACGAGTT TGAACTGCGG TACCGGCGGG CATTCAGTGA CCTGACATCC
	360 370 380 390 300
19 Bclxl/pAS2-1	CAGCTCCACA TCACCCCAGG GACAGCATAT CAGAGCTTTG AACAGGTAGT
	410 420 430 440 450
19 Bclxl/pAS2-1	GAATGAACTC TTCCGGGATG GGGTAAACTG GGGTCGCATT GTGGCCTTTT
	460 470 480 490 500
19 Bclxl/pAS2-1	TCTCCTTCGG CGGGGCACTG TGCGTGGAAA GCGTAGACAA GGAGATGCAG

FIG. 10C

	510 520 530 540 550
19 Bclxl/pAS2-1	GTATTGGTGA GTCGGATCGC AGCTTGGATG GCCACTTACC GGAATGACCA
	560 570 580 590 600
19 Bclxl/pAS2-1	CCTAGAGCCT TGGATCCAGG AGAACGGCGG CTGGGATACT TTTGTGGAAC
	610 620 630 640 650
19 Bclxl/pAS2-1	TCTATGGGAA CAATGCAGCA GCCGAGAGCC GAAAGGGCCA GGAACGCTTC
	660 670 680 690 700
19 Bclxl/pAS2-1	AACCGCTGAG TCGACCTGCA GCCAAGCTAA TTCCGGGCGA ATTTCTTATG
	710 720 730 740 750
19 Bclxl/pAS2-1	ATTTATGATT TTTATTATTA AATAAGTTAT AAAAAAAATA AGTGTAT

FIG. 11

Amino Acid Sequence of Bclxl (TM)
Used As Bait In Yeast 2-Hybrid Screen.

```
         10        20        30        40        50        60        70
MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATA    70
HSSSLDAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRI   140
VAFFSFGGALCVESVDKEMQVLVSRIAAWMATYLNDHLEPWIQENGGWDTFVELYGNNAAAESRKGQERF   210
NR                                                                         212
```

Application No.:
Inventors: Robert John MARK, et al.
Attorney Docket No.: AM100012-P2
Title: PABLO, A POLYPEPTIDE THAT INTERACTS...
Customer No. 25291

FIG. 12A

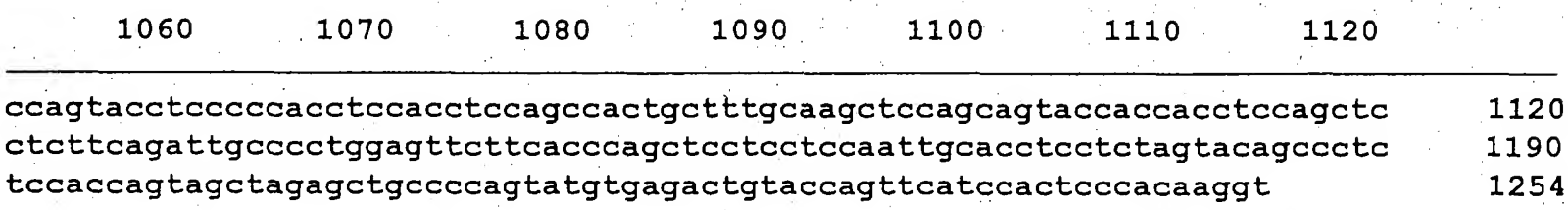
Nucleotide Sequence of Pablo D142

```
      10         20         30         40         50         60         70
atgccgctagtgaaaagaaacatcgatcctaggcacttgtgccacacagcactgcctagaggcattaaga    70
atgaactggaatgtgtaaccaatatttccttggcaaatataattagacaactaagtagcctaagtaaata   140
tgctgaagatatatttggagaattattcaatgaagcacatagtttttccttcagagtcaactcattgcaa   210
gaacgtgtggaccgtttatctgttagtgttacacagcttgatccaaaggaagaagaattgtctttgcaag   280
atataacaatgaggaaagctttccgaagttctacaattcaagaccagcagcttttcgatcgcaagacttt   350

      360        370        380        390        400        410        420
gcctattccattacaggagacgtacgatgtttgtgaacagcctccacctctcaatatactcactccttat   420
agagatgatggtaaagaaggtctgaagttttataccaatccttcgtatttctttgatctatggaaagaaa   490
aaatgttgcaagatacagaggataagaggaaggaaaagaggaagcagaagcagaaaaatctagatcgtcc   560
tcatgaaccagaaaaagtgccaagagcacctcatgacaggcggcgagaatggcagaagctggcccaaggt   630
ccagagctggctgaagatgatgctaatctcttacataagcatattgaagttgctaatggcccagcctctc   700

      710        720        730        740        750        760        770
attttgaaacaagacctcagacatacgtggatcatatggatggatcttactcactttctgccttgccatt   770
tagtcagatgagtgagcttctgactagagctgaggaaagggtattagtcagaccacatgaaccacctcca   840
cctccaccaatgcatggagcaggagatgcaaaaccgatacccacctgtatcagttctgctacaggtttga   910
tagaaaatcgccctcagtcaccagctacaggcagaacacctgtgtttgtgagccccactcccccacctcc   980
tccaccacctcttccatctgccttgtcaacttcctcattaagagcttcaatgacttcaactcctccccct  1050
```

FIG. 12B



Application No.:
Inventors: Robert John MARK, et al.
Attorney Docket No.: AM100012-P2
Title: PABLO, A POLYPEPTIDE THAT INTERACTS...
Customer No. 25291

FIG. 13

Amino Acid Sequence of Pablo Δ142

```
         10         20         30         40
MPLVKRNIDPRHLCHTALPRGIKNELECVTNISLANIIRQ  40
LSSLSKYAEDIFGELFNEAHSFSFRVNSLQERVDRLSVSV  80
TQLDPKEEELSLQDITMRKAFRSSTIQDQQLFDRKTLPIP 120
LQETYDVCEQPPPLNILTPYRDDGKEGLKFYTNPSYFFDL 160
WKEKMLQDTEDKRKEKRKQKQKNLDRPHEPEKVPRAPHDR 200

        210        220        230        240
RREWQKLAQGPELAEDDANLLHKHIEVANGPASHFETRPQ 240
TYVDHMDGSYSLSALPFSQMSELLTRAEERVLVRPHEPPP 280
PPPMHGAGDAKPIPTCISSATGLIENRPQSPATGRTPVFV 320
SPTPPPPPPPLPSALSTSSLRASMTSTPPPPVPPPPPPPA 360
TALQAPAVPPPPAPLQIAPGVLHPAPPPIAPPLVQPSPPV 400

        410        420        430        440
ARAAPVCETVPVHPLPQG                        418
```

FIG. 14

PABLO and deletion constructs

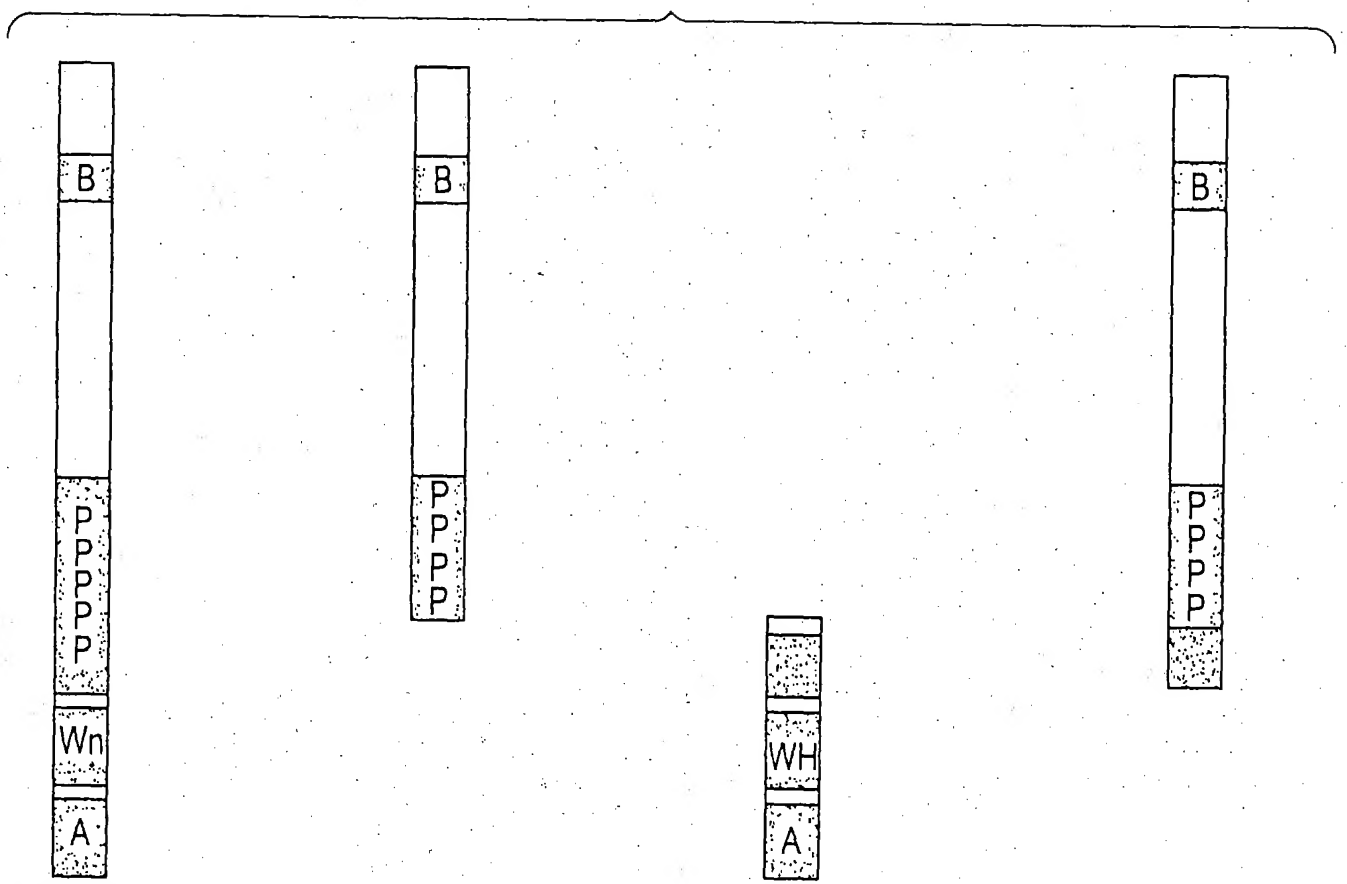


FIG. 15

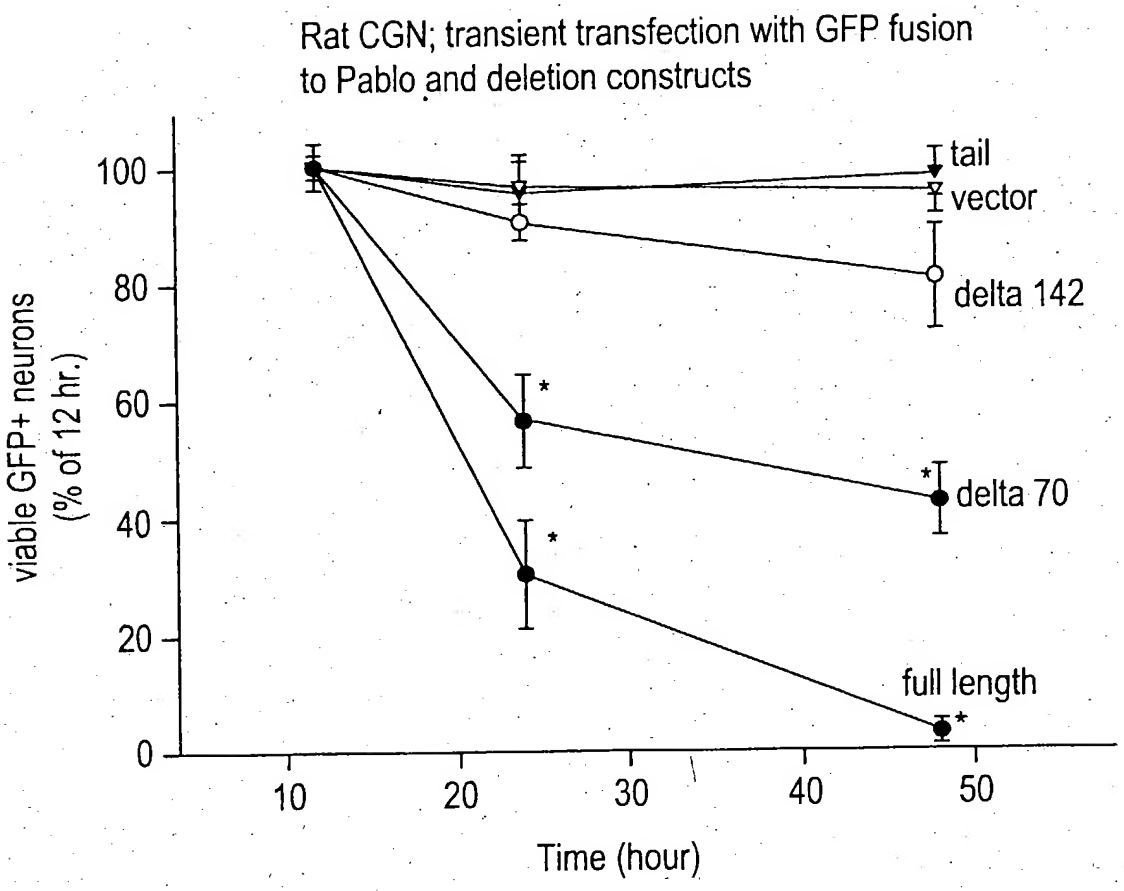

Rat CGN; transient transfection with GFP fusion to Pablo and deletion constructs
viable GFP+ neurons (% of 12 hr.)
100
80
60
40
20
0
10
20
30
40
50
Time (hour)
tail
vector
delta 142
delta 70
full length
*

FIG. 16

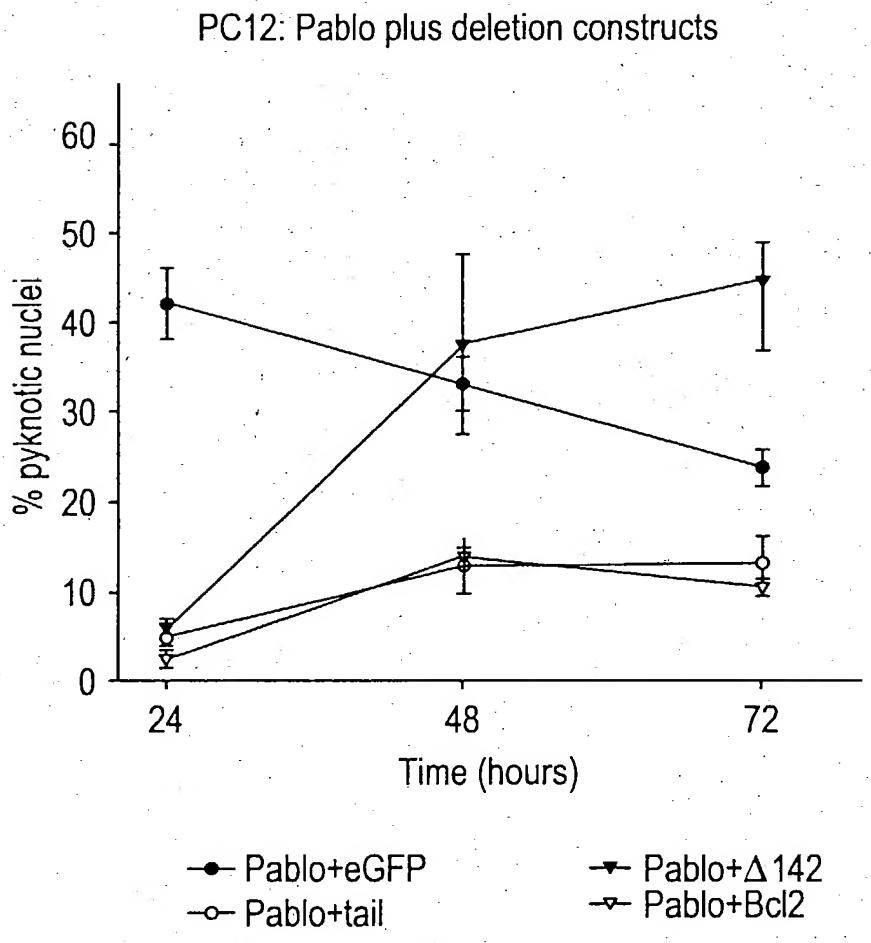

PC12: Pablo plus deletion constructs
% pyknotic nuclei
60
50
40
30
20
10
0
24
48
72
Time (hours)
Pablo+eGFP
Pablo+tail
Pablo+Δ142
Pablo+Bcl2

FIG. 17

Search for a Dominant Negative Pablo

Transfection	DNA
1	Pablo-eGFP + eGFP
2	Pablo-eGFP + tail-eGFP
3	Pablo-eGFP + delta 142-eGFP
4	Pablo-eGFP + Bcl-2-eGFP